



Treaty Natural Resource

Red Cliff Band of Lake Superior Chippewa

Volume 5, Issue 3 Fall 2016

Ganawenjigaade

It is taken care of, protected...We take care of, protect, keep it



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Employee of the Month & New Employee

By: Chad Abel

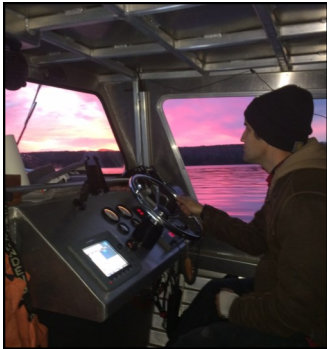
An office is only as good as its staff. And we here at the Treaty Natural Resources Division think we have some of the best. The following team members were nominated for Employee of the Month in the last three months by their fellow co-workers.



July Employee of the Month

Shelly Gurnoe, Office Manager

Shelly won EOTM honors in July for her timeless dedication to the departments and the Division. She creates all the purchase requisitions for our office, tracks all of our payments, and completes nearly all of the data entry for our programs. Shelly makes all of us look better at our jobs (including me). Thank you, Shelly!



August Employee of the Month

Chase Meierotto, Hatchery Manager

Chase was nominated for EOTM for his involvement in this year's summer youth intern program in the TNR Division. Chase improved the structure of the program and made the interns more accountable to their involvement and effort. He also proved to be a good role model for them by demonstrating how to behave professionally in the work place. The intern program concluded its 5th year in 2016, and it may have been the best year yet. Thank you Chase for stepping up to improve our summer youth program!



September Employee of the Month

Lisa Bissell, Grants and Contracts Manager

Though not technically a TNR Division staff member, Lisa is one of the most important members of our team. Lisa manages the Division's funds which involves booking payroll, authorizing payments, and requesting reimbursement to a suite of over 50 different program codes. We're fortunate to have her! Thanks, Lisa. Your recognition was a long time in coming.



New Employee at TNR-Environmental

My name is William A. Gilane, everyone knows me by Tony, which is what I prefer to be called. I will be working at the Environmental Department as the LAMP Outreach Coordinator. My work experience has been mostly in the Chequamegon Bay area at places like GLIFWC and Bad River NRD. I earned a Bachelor of Science Degree in biology at the University of Wisconsin-Superior in 2010. I am looking forward to new challenges working at the Red Cliff Band's Treaty Natural Resources Division as your LAMP Outreach Coordinator.

American Marten & Fisher Research Update

Red Cliff Wildlife & Forestry

Treaty Natural Resources: Fall Newsletter 2016



Female American Mar-



July-Sept Project Notes

- ***Captured First Red Cliff American Marten @ Eagle Bay, 1.3 lb Female***
- ***Downloaded first fisher GPS dataset***
- Caught a skunk and several short and long tailed weasels
- 30 single door live traps, 5 double door live traps
- Traps are covered and insulated with hay, woody debris
- 3 types of trap covers: plastic bucket, wooden box, rubber cylinder
- Bait used=Venison, Rabbit, Turkey

First Trapped Red Cliff American Marten

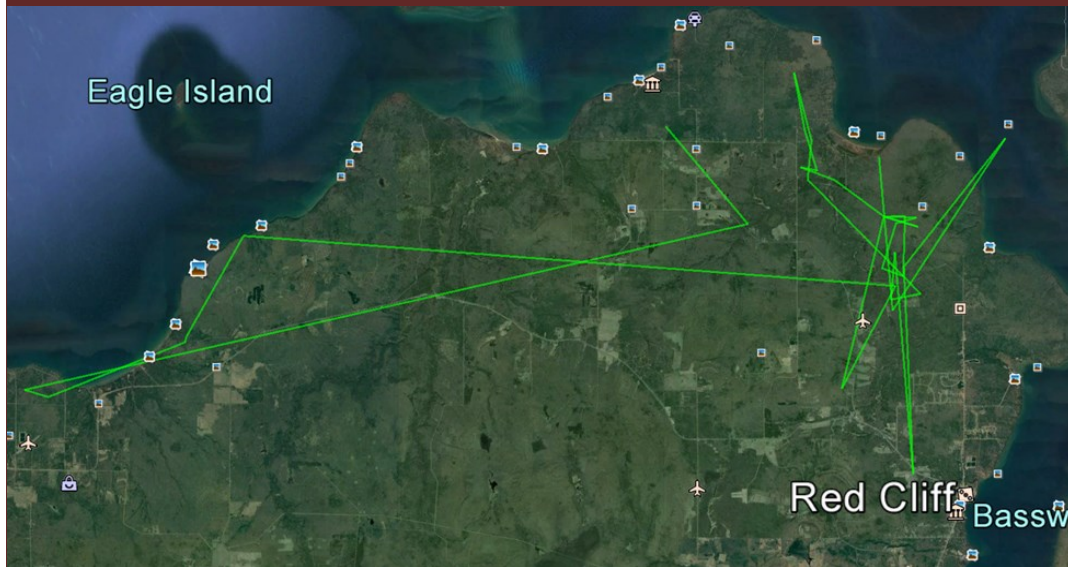


Characteristic throat patch, unique to each marten

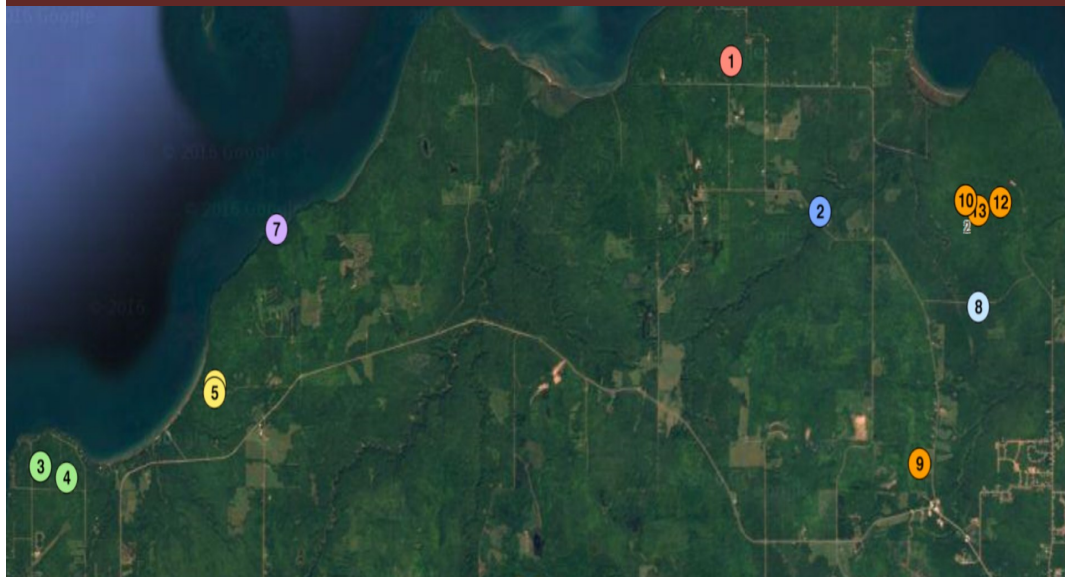
Tales from the Trap-line: Assistant Wildlife/ Forestry Biologist

Recently, the fisher and marten research project has been a roller coaster of emotions for RC Wildlife Staff. Staff were elated to capture the first American marten since the start of the project and also download the first data set from the fisher that was collared in June, F12. The excitement of the first marten capture was short lived however. The American marten appeared to be very thin and was dehydrated and hypothermic upon being discovered in the trap. Staff rushed the marten to the vet in an attempt to save the marten, but attempts were unsuccessful. The death of the marten, while extremely saddening, was not in vain. Genetic samples were obtained, which will tell us what population this marten, and potentially other RC marten, came from. Samples were also tested for disease but results were inconclusive. A tooth will be used to age the marten, utilizing a technique that counts cementum annuli, somewhat similar to how fish and trees are aged. If the marten is less than 6 years old, it

First Set of Fisher GPS Coordinates



June-September



June and July Only

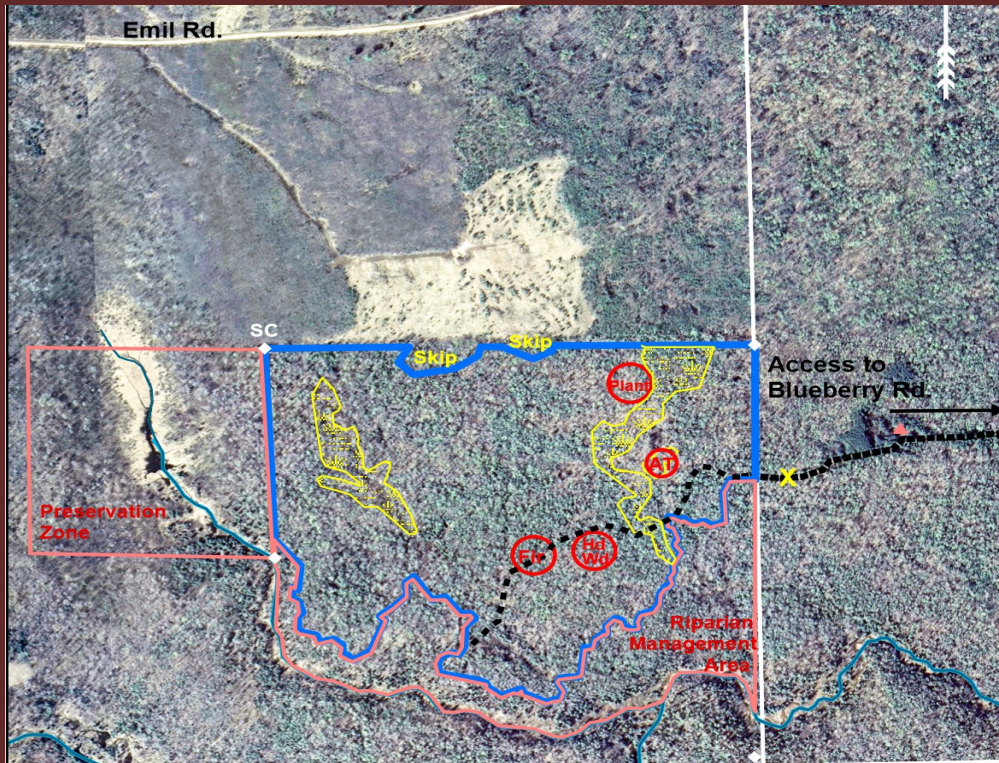
Tales from the Trap-line: Assistant Wildlife/ Forestry Biologist

Typically, a female fisher could be expected to have a home range of about 4-5 square miles. However, traditional collar studies with fishers involved VHF technology, with coordinates being collected during the day, a few times a week at the most. Due to the fact that fishers are more active at night, these previous studies likely missed the bulk of fisher movements and could not account for movements across long distances due to limited time and staff available to track individuals. The development of GPS collars small enough to safely deploy on a fisher has led to some interesting new discoveries. Fisher and marten fitted with these special collars are proving that they do not fit within the home range constraints placed on them by scientific literature. It turns out these small mustelids can travel long and far if they are looking for food, territory, or a mate. Our only collared fisher is no exception. The longest straight line distance between points for F12 was 13.5 miles! Over a 4 day period, she even went to Cornucopia and back which was quite baffling to staff, but explained why we were unable to find her during that period, because we certainly never thought to take our telemetry unit to Cornucopia to look for her. Once we make a small adjustment to the length of time the collar looks for a satellite fix, we should be able to generate more data points and learn even more about her movements.

Forestry Update

Red Cliff Wildlife & Forestry

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The Red Cliff Tribal Council approved this timber sale offering for bidding in a December 2014 resolution.

This sale will provide forest management on 103 acres, which is 245 percent of the Tribe's annual allowable cut (AAC: 25 percent of annual growth volume) of 42 acres per year. This 25 percent AAC rate was specified in the 2006 IRMP, but no cutting unrelated to urban development has occurred since then. Volume-wise, this is only utilizing 81 percent of annual growth volume of the forest.

The East boundary of the sale area is connected to Blueberry Rd., a half-mile west, by an overgrown 2-track logging road, which will be the access road for the sale. The sale is in the SE quarter of Section 13, T51N R4W

The sale is entirely on Tribal Trust land. The South and West boundaries abut resource protection areas for a tributary of Red Cliff Creek (south boundary) and the Red Cliff Trust Preserved Zone. To the north is Bayfield County land where three clearcuts of different ages border the sale area. To the east is more Tribal Trust land with mature timber. All external boundaries are marked with blue paint blazes. Scattered, unmarked wetlands exist and are protected by Wisconsin Forestry Best Management Practices for Water Quality (BMPs).

Timber Harvest Goals

- *Generate revenue for the Tribe*
- *Demonstrate high reserves harvest*
- *Induce increased growth, recruitment, and regeneration of reserve trees*
- *Preserve structural diversity of the forest for wildlife, vegetation, water resources, and other ecosystem protection and enhancement goals*
- *Demonstrate an alternative silvicultural prescription to clearcutting*

Timber Harvest Notes

- Harvest will begin in winter 2016-2017 and will encompass 103 acres of a 200 acre tract
- Approximately 2,734 cords of aspen (**Only Aspen**) Situated between Blueberry and Emil Rd.
- 4 small test plots will be done to draw conclusions for prescriptions on similar sites
- Heavy equipment warning signs will be located near the sale on Blueberry rd.
- Dislike for Bayfield County clearcuts within the reservation boundary was one of the main concerns from Tribal members.
- Winter harvest will help deer survive winter and provide more game for Tribal hunters

Former GTAC President Guilty of Crimes Against the Environment

By Amorin Mello, Environmental Justice Specialist



Bill Williams
ex Director de Mina de
CLC

Former Gogebic Taconite LLC (GTAC) president William Thomas “Bill” Williams was convicted of “crimes against the environment” during his previous employment as a director at the Cobre Las Cruces (CLC) mine near Seville, Spain. CLC is owned by Canada-based First Quantum Minerals. François Fleury and Paz Cosmen were two other CLC mine officials that were also charged and found guilty along with Williams.

The charges were filed in 2008 by Ecologistas en Acción (Ecologists in Action), a Spanish coalition of more than three hundred environmental groups. Earlier this month, CLC and the three defendants were found guilty of illegally taking water from a



Seville aquifer, reserved strictly for residents in case of an emergency, with unpermitted wells. The water interacted with sulfide minerals at the mine, generating sulfuric acid mine drainage and released arsenic into the water. The contaminated water was then re-injected back into the same aquifer reserved for emergency drinking water.



AP Laserphoto
Bill Williams, mining manager of Copper Range Co., inspects copper ore at the White Pine Mine. The company hopes to extract copper chemically.

Williams and Fleury apparently were also both employed by the White Pine Mine, owned by the Copper Range Company, in the Upper Peninsula of Michigan when began downsizing in 1995. Newspaper archives from the Ironwood Daily Globe show that Williams was the White Pine Mine official that engineered and promoted the “solution-mining” experiment. This was attempted to continue the lifespan of this mine by transporting 50 million gallons of concentrated sulfuric acid solution to leech out the remaining copper from the mine.

The late Walter Bresette of Red Cliff performed a critical role in the Bad River Train Blockade that stopped the White Pine Mine “solution mining” experiment. We honor the wisdom and courage that Bresette and other Anishinaabe Ogitchidaa had while working to defend Lake Superior and the Bad River Reservation from the effects of sulfuric acid and contaminated water during Williams’ employments at the White Pine Mine and at GTAC.

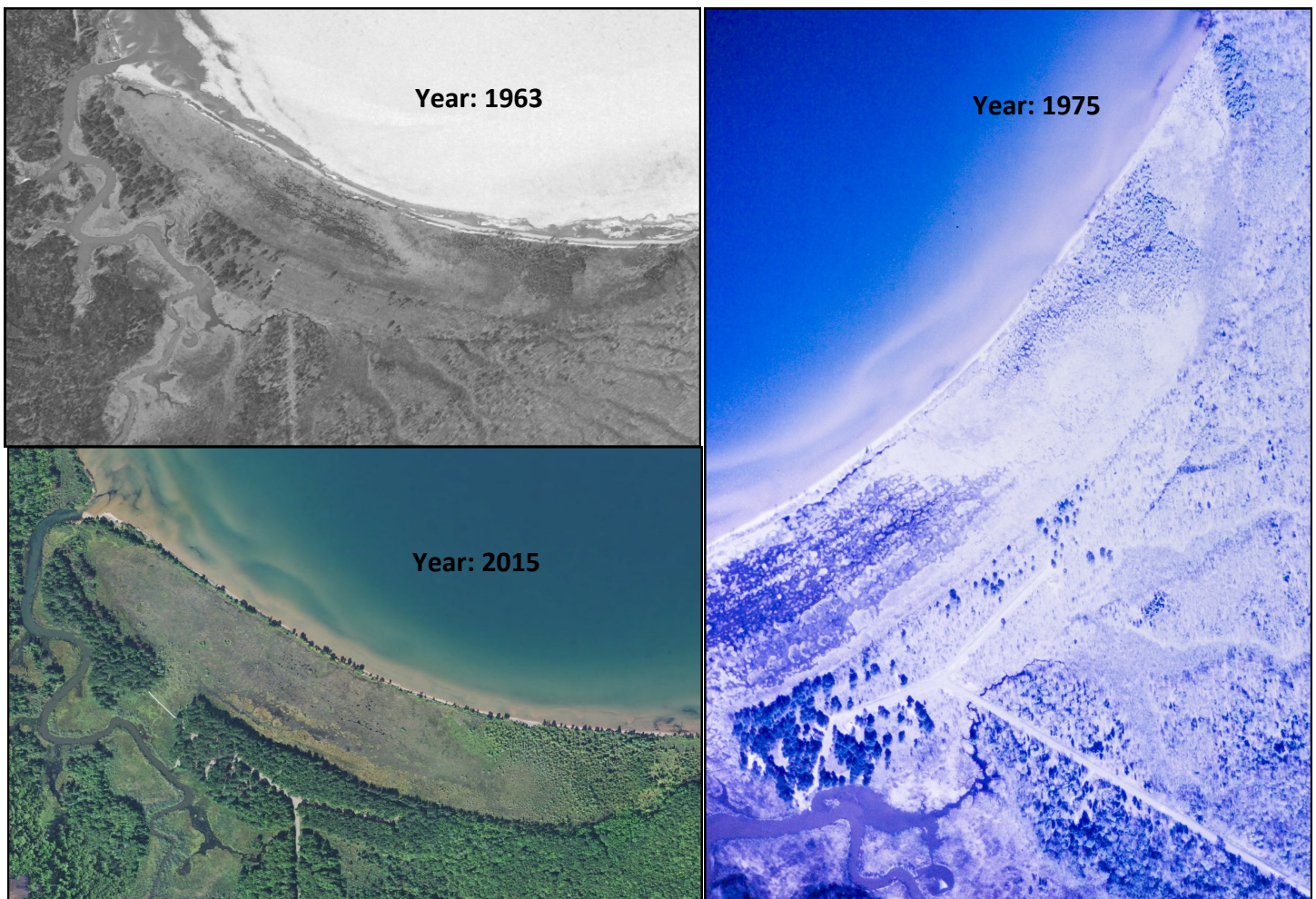


Prescribed Fire at Raspberry Campground

Submitted by Todd Norwood, Project Coordinator, TNR

A few years ago, the Treaty Natural Resources Division (TNR) held a community listening session for potential natural resources projects or concerns on Red Cliff lands. One of the projects presented by TNR staff was the idea of prescribed fire at Raspberry Campground. This wasn't necessarily a new idea, in fact, many Tribal Members remember this area burning many years ago and probably at a somewhat frequent interval. Many also recall miinan (blueberries). Indeed, the forested area of Raspberry has expanded and become increasingly dense in the understory. As a result, much of the former miinan habitat is now too shaded to produce fruit. Returning prescribed fire to this area will likely, through time, reduce tree density and allow miinan to re-establish and produce fruit once again. Currently, we are working on the development of a burn plan in collaboration with the BIA and aim to burn one patch (of multiple patches over time) during Spring 2017. As part of this project, we hope to open balsam bough harvesting this fall within the proposed burn area, where whole balsam trees could be harvested. Prior to fire ignition, the removal of understory balsam trees is needed to reduce fuels that will produce excessive heat on the larger pines we are trying to conserve. If plans move forward without too many set-backs, we will announce an opening for the bough harvest.

Below are a few photos showing how open Raspberry Campground was, possibly as a result of fire, and also its current state of dense forest. Take notice of the area just east of the actual campground and artesian well. We suspect tree reduction won't need to be as extreme as the 1963/1975 photos to produce miinan.



Chicago Creek Fish Ladder

Submitted by Todd Norwood, Project Coordinator, TNR

Chicago Creek is one of only a few Red Cliff streams where water quality, temperature, and other habitat factors all align, allowing native brook trout to exist. However, there's long been an impediment to the movement of trout throughout this stream system: the Blueberry Road culvert. The Treaty Natural Resources Division (TNR) has had this culvert barrier on their radar for many years, and in fact, previous projects attempted to address the problem of fish passage.

A few years ago, a rock weir system designed to raise the water level through a series of pools was installed at the downstream end of the culvert. Fish located downstream now had access into the culvert, which was previously perched above the actual stream level, and then on to the upstream reaches of the creek. Although the system did indeed raise the water level, we found that during low flow periods the water level inside the culvert was still too low to allow fish passage through its entirety.

At 180 feet in length, the Blueberry Road culvert is a difficult place for fish to navigate. It's man-made and dissimilar to the rest of the stream habitat fish are familiar with, while low water levels and no natural substrate leave fish feeling exposed to predation or unable to physically swim any farther. To remedy this, we would need to pool the water inside the culvert similar to the downstream weir system.

We worked with an engineering firm to develop a baffle system throughout the culvert that would pool water and provide optimal levels even during low flow. Between the baffles, we placed rock to provide additional water flow disturbance and small resting and hiding locations for the fish as they make their journey up the culvert. Although it's not a natural bottom, such as a bridge provides, we feel this structure with the added rock and sediment that fills in through time will be very beneficial to trout movement throughout Chicago Creek.

Over a period of two days in mid-September, TNR staff installed the fish ladder system and early observations suggest we successfully raised water levels throughout the culvert. Hopefully, the brook trout approve!



Juvenile Lake Sturgeon Index Survey for Lake Superior

The Lake Superior Binational Program: Coordinated Science and Monitoring Initiative (CSMI) funded the inter-agency effort. US Fish and Wildlife Service took the lead on the project which included most State, Federal, Tribal, and Canadian fisheries agencies to conduct the work.

This survey is a lake wide cooperative effort implemented to address several priority needs identified in the Lake Sturgeon Rehabilitation Plan. Developed by the Lake Sturgeon Work Group as a function of the Lake Superior Technical Committee of which Red Cliff is committee representative.

Figure 1: Juvenile Lake Sturgeon.



Figure 2: Prepping surgery.



a Lake Sturgeon for

During the Red Cliff portion of the survey we captured 10 Lake Sturgeon near the Montreal River. Conducted 8 surgeries to implant hydro acoustic devices so we can monitor where they are moving and to better understand where they spend most of their time. The Red Cliff fish hatchery will be conducting a similar survey with hydro acoustic devices in the near future.

Free

Deer Aging

Why Bring Your Deer in to be Aged?

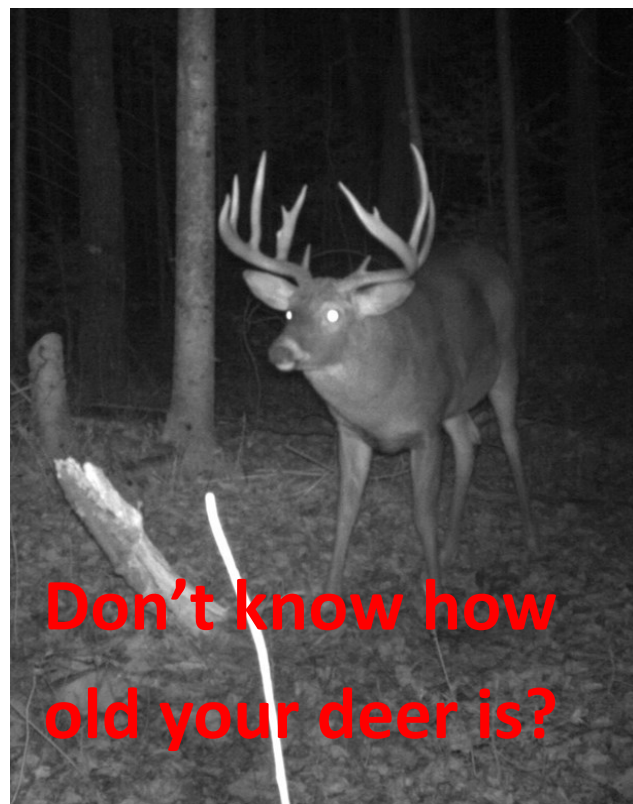
- Deer population demographics will aid RC Wildlife/Forestry in population modeling
- Deer population demographics will help RC Wardens set sustainable harvest quotas
- Learn pre and post harvest aging techniques
- We can age the deer in your trail cam photos



Call or Email RC Wildlife:

Jeremy.st.arnold@redcliff-nsn.gov or

Ron.Nordin@redcliff-nsn.gov 715-779-3795

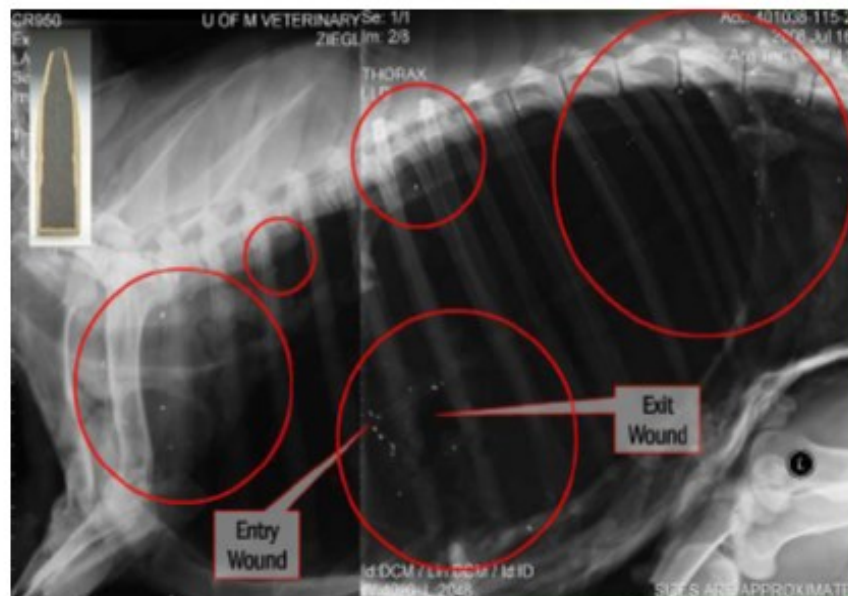


Don't know how old your deer is?

**Bring Your Deer to the
Broodstock Building
(Across from RC Fish
Hatchery) for Aging; 8-3
Mon-Fri; Call or Email First**

**Red Cliff
Treaty Natural
Resources**

Why your deer may be dangerous even after you shoot it.....



A recent study conducted by the USGS at the National Wildlife Health Center has shown that there were elevated ammunition-associated lead levels in consumers' wild game. In the adjoining photo it shows the placement of lead from ammunition in the study's carcass (with white specks being lead). In surveys distributed to food banks the surveys showed that 8-15% of WI donated venison to food shelves contained lead fragments.

These lead fragments are not only harmful to humans but are also

hurting our Wisconsin wildlife. Some of the many affected animals include *carrion* birds such as eagles and vultures, canines such as wolves and coyotes, and waterfowl such as ducks and geese. An unusual bird that is dropping in populations due to lead poisoning is woodcocks. Some other examples of lead that animals ingest are spent shot (waterfowl, upland game), sinkers (waterfowl), mine tailings (waterfowl), and paint chips.

Lead can cause neural degeneration, kidney damage, bone damage, and inhibits blood formation and nerve transmission. The body mistakes lead for calcium and then transports it to nerve cells and other tissues.

What can I do to help?

Switching to ammunition that does not contain lead will greatly reduce mortality in wildlife *and limit the chance of human ingesting lead fragments*. Unfortunately this ammunition does cost more but saving a few dollars to help the conservation of wildlife and *humans health* is worth it.



On left: Lead rifle bullet with fragments produced. On right: Ammo made out of copper has no fragments

Red Cliff Reservation Hunting, Trapping, and Fishing Seasons



Some seasons may be subject to change. Consult the tribal ordinances before going hunting.

Small Game Hunting Season: Requires Tribal ID

Species:	Daily Bag:	Season:
Ruffed Grouse	10	Sept. 1 - Dec. 31
Sharptailed Grouse	10	Sept. 1 - Dec. 31
Squirrel	10	Sept. 1 - Dec. 31
Raccoon	None	Open All Year
Rabbit and Hare	5	Open All Year
Bob White Quail	5	Open All Year
Pheasant	5	Sept. 1 - Dec. 31
Fox	1	Open All Year
Bob Cat	1 Per Season	Open All Year
Morning Dove	None	Open All Year

Check Tribal Ordinances on regulations regarding "Protected Species," and "Animals and Birds Causing Damage."

Big Game Hunting Season: Requires Tribal Transportation Tag

Species:	Season:
Deer	Antler Antlerless July 1 - Dec. 31 Sept. 1 - Dec. 31
Bear	Sept. 1 - Nov. 30

Trapping Season: Requires Tribal Trapping Permit

Species:	Reservation Quota or Season Limit:	Season:
Beaver	No Limit	Oct. 15 - Apr. 30
Bobcat	Reservation Quota: 1 bobcat per year	Oct. 15 - Dec. 31
Fisher	Reservation Quota: 20 per year	Oct. 15 - Mar. 31
Fox	No Limit	Oct. 15 - Feb 28
Mink	No Limit	Oct. 15 - Feb 28
Muskrat	No Limit	Oct. 15 - Apr. 30
Otter	1 per trapper per year	Oct. 15 - Apr. 30
Raccoon	No Limit	Oct. 15 - Jan. 31

Fishing Regulations on Lake Superior: Requires Tribal ID

Species: Walleye, northern pike, white bass, rock bass, bluegill, crappie, pumpkinseed, bullheads, yellow bass, catfish, cisco, whitefish, rough fish, largemouth and smallmouth bass, muskellunge, trout and salmon. *, **

Season: Year Round
Bag Limit: None
Size Limit: None

* No person may fish in a refuge, as described in Tribal Codes.

Sturgeon *, **
Season: Year Round
Bag Limit: One per person per day
Size Limit: None

** No person may use more than 30 attended or unattended lines.

Wild Rice Event at Raspberry Campground

On Saturday September 24th, community members gathered at the Raspberry Campground for a variety of wild rice related activities.

The day started off with both traditional and modern demonstrations of wild rice processing. First, wild rice was parched over a fire in kettles, which requires continuous stirring (pictured to the right and below).



Next, the rice was processed with either the modern method or the traditional method.



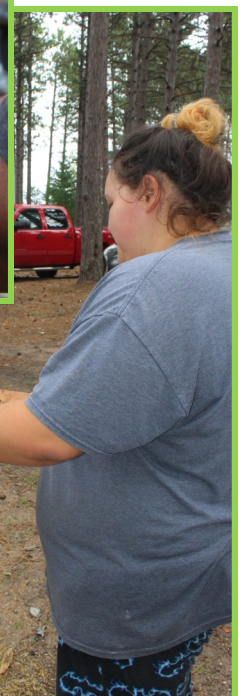
Modern wild rice processing consists of parching the rice, then putting it into a thrashing machine (right), which removes the husks and blows them out the top.



Traditional wild rice processing includes parching, dancing on the rice, and winnowing.

Dancing on the rice is done with rice moccasins (clean, never worn on the ground), in a small hole that is draped with a canvas tarp. The

dancing, or sliding motion, must be done gently to prevent breaking the rice.



Winnowing is done last, with the rice being placed in a winnowing basket and gently tossed into the air. This process allows the husks to blow away in the wind and the heavy rice to fall back into the basket.

The Treaty Natural Resources Division has reseeded the Raspberry River for the past four consecutive years. The past two years, the Environmental Department has been collecting water quality parameters, specific to wild rice, such as: substrate matter, flow, depth, pH, conductivity, and a variety of nutrients. Next year, monitoring will enter into phase two and we will conduct density surveys to see how effective reseeding and wild rice establishment is.



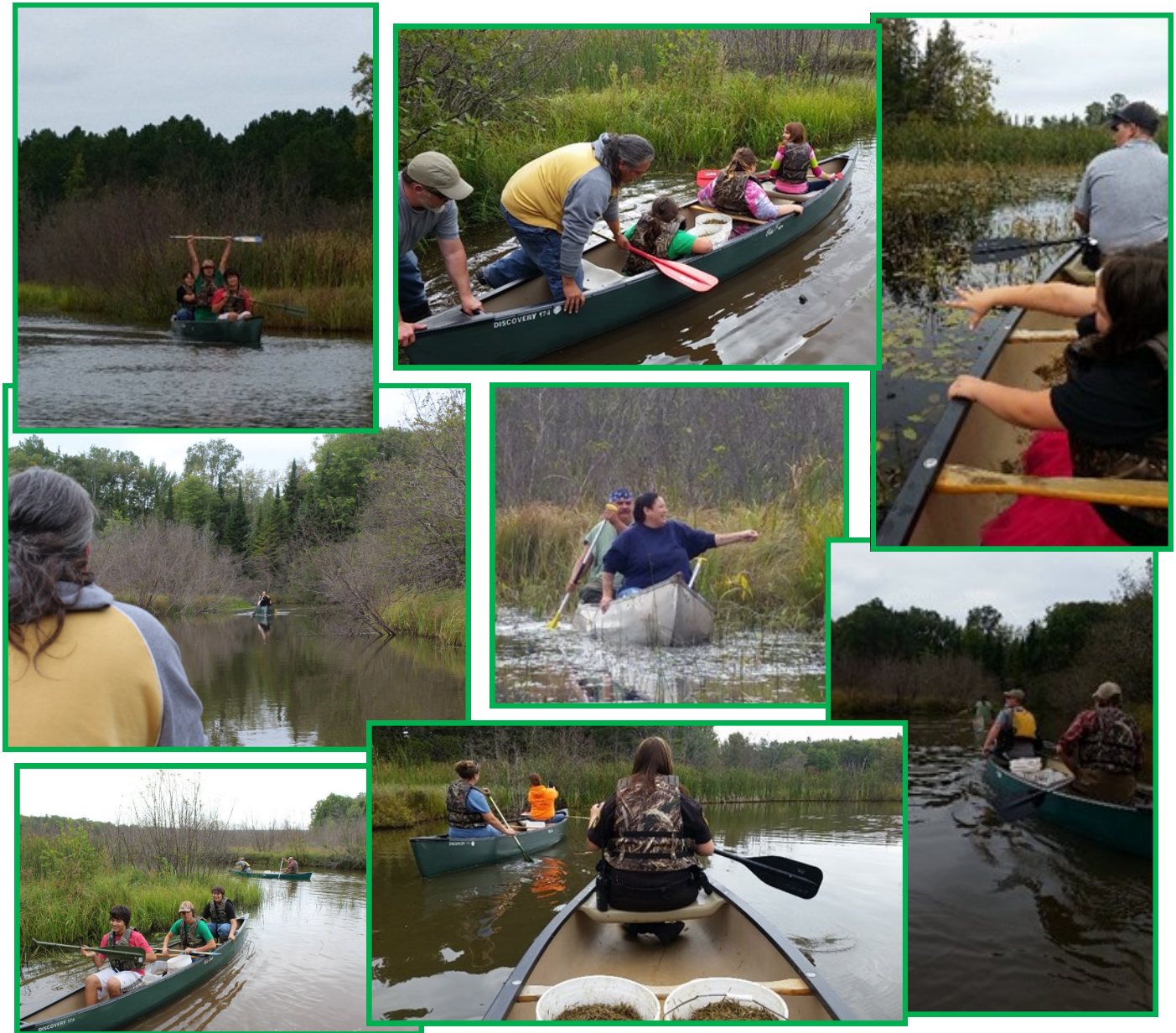
While some attendees stayed on dry land to process wild rice, Linda Nguyen led a group of several canoes out to reseed inlet areas of the Raspberry River before and after lunch.



Right, Todd Norwood and Ron Nordin split up wild rice that was received from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC), into five gallon buckets for easier broadcasting from the canoes. Left, Reed Saam scoops mud into buckets.



Some canoes were assigned to make and cast mud balls with rice and others just broadcasted. Each acre of potential or actual wild rice areas was seeded with anywhere from 35-40 pounds of wild rice seed. Despite the two big storms the Chequamegon Bay area experienced this past summer, four out of the five inlet areas had wild rice stalks.



It was great to see many generations out on the water and at this event. We look forward to hosting more events in the future! If you are interested in seeing more photos or would like digital copies, stop at the Environmental Department, located at 37295 Community Rd or call us at 715-779-3650.

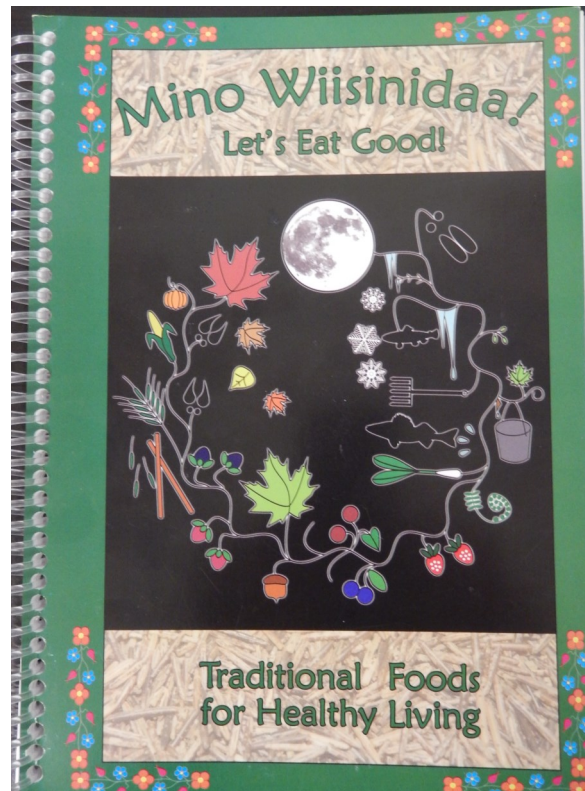
Miigwetch to all those that came out and made this a successful event!

-Gabrielle VanBergen and Linda Nguyen

Free Traditional Foods For A Healthy Living Cookbook Available

Limited copies of the *Mino Wiisinidaa! Let's Eat Good! Traditional Foods for Healthy Living* cookbook and DVD are now available free through the ECC, Nutrition Department, and the Food Distribution Center, and are on sale at <http://glifwc.org/publications/index.html>.

The cookbook features traditional Anishinaabe foods, including recipes as well as food gathering and harvest tips that were shared by tribal community members and elders. When paging through the 200 pages of recipes and their accompanying color photos, be sure to check out the contributions from Red Cliff tribal members Julie and Bill Ante and Gertrude Deragon who shared their recipes for Watercress-Zucchini Soup and Sweetened Wild Rice Flour Bannock.



Mino Wiisinidaa! highlights seasonal and locally available food, and fall in Red Cliff is a great time for seasonal, local food. In fact, the squash and apples at the Red Cliff Community Farm look just about ripe for the picking. Be sure to try the easy and tasty recipe for roasted squash and apple soup that was provided by Sue Lemieux of Bad River. The recipe can be found on the back of this page.



Mino Wiisinidaa! is the culmination of a three year long project headed by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and funded

ROASTED SQUASH AND APPLE SOUP RECIPE

Original concept from Sue Lemieux, Bad River

Prep: 1 hour 30 minutes Cook 30 minutes Total 2 hours

Serving Size: 1 cup Yield 16

Ingredients

6 pounds butternut squash
2 pounds apples, cored and unpeeled
2 teaspoons sunflower seed oil
1 medium yellow onion, diced (about $\frac{3}{4}$ cup)
1 salt
 $\frac{1}{2}$ teaspoon black pepper, ground
teaspoon ground nutmeg
 $\frac{1}{4}$ teaspoon ground cinnamon
2 quarts low sodium chicken stock

Directions:

1. Preheat oven to 400°F.
2. Place squash flesh side down on lightly oiled baking sheet pan. Roast squash for about 1 hour or until soft and lightly browned. You should be able to pierce the center of the squash easily with a fork. Remove squash from baking sheet and allow it to cool to the touch.
3. Cut apples into quarters, then place on oiled baking pan (reuse the sheet pan from the squash roasting). Roast apples for about 15 minutes or until soft and lightly caramelized.
4. Meanwhile, scoop squash flesh into a bowl, being careful to avoid adding any skin.
5. In a medium stock pot, heat oil over medium-high heat. Once oil is hot, add onion and cook until translucent and soft, about 5 minutes.
6. Add scooped roasted squash and apples to stock pot, stirring to combine.
7. Add salt, pepper, nutmeg, and cinnamon. Once mixed, add chicken stock and additional water to cover and gently stir to incorporate.
8. Bring soup to a boil and reduce to a simmer. Stir often to prevent burning.
9. Simmer for 15 minutes and remove from heat.
10. Very carefully, as soup will be very hot, ladle manageable batches into a blender and blend until smooth. Remove to serving dish.
11. Add additional water to adjust consistency and serve hot.



Attention- Soup will bubble wildly if too hot. Stir frequently and keep heat low.

Latest Great Lakes Pollution Threat: Micro Plastics

Submitted by Tony Gilane LAMP Outreach Specialist

September is micro plastics awareness month. An emerging new issue of the Great Lakes Restoration Initiative (GLRI) is the presence of micro plastics in the Great Lakes. Only a handful of sampling surveys for micro plastics have been conducted by scientists in the Great Lakes regarding this ever growing threat.

Micro-plastics and micro-beads are small pieces of plastic—typically less than 5 millimeters (0.2 inches) in size or about the size of a pinhead—that find their way into a water system in a variety of ways. Micro beads



are used as exfoliates in beauty and personal care products like bath gels, facial scrubs, rinse off cosmetics, and toothpaste. The micro beads used in these and other products are too small for waste water treatment plants to filter out so they wash down your drains and into the Great Lakes. Other pathways micro plastics enter a water body is by photodegradation, meaning the breakdown of larger pieces of plastic such as plastic bags, water bottles, wrappers and old tires.



Collecting a micro plastics sample using a neuston net, Milwaukee River, Milwaukee, Wisconsin.



USGS scientists Pete Lenaker and Nic Buer collect micro Plastics in the Manitowoc river Manitowoc, Wisconsin.

Scientists search for micro plastic particles suspended at or near the surface of lakes and tributaries by trolling a fine mesh net from a boat or by wading through streams and rivers. A recent study sampled 29 Great Lakes tributaries in six different states. Plastics were found in all 107 samples.

Micro beads have proven to be harmful to the environment because fish, turtles, and other aquatic organisms mistake them for food. Further research is needed to better understand the implications on human health, especially through ingestion and chemical transfer through the food chain.

Interestingly enough, environmental agencies and Congress are paying attention to this issue. President Obama signed bill, Microbead-Free Waters Act of 2015, to ban rinse-off cosmetics that contain intentionally -added plastic microbeads beginning on January 1, 2018.

How We Can Help Reduce the Problem

For now, there are a few things you can do to help mitigate the problem. Check the ingredients of health and beauty aids products that you use and choose products that do not include polyethylene beads. Some companies use natural skin exfoliates such as crushed seeds from apricots and cocoa beans. We live on the shores of the Greatest of the Great Lakes. Let's be sure to recycle and to clean up after ourselves especially at the beach where plastic litter could end up as a micro plastic in Gitchi Gami. More information on this topic can be obtained on the USGS micro plastics website.



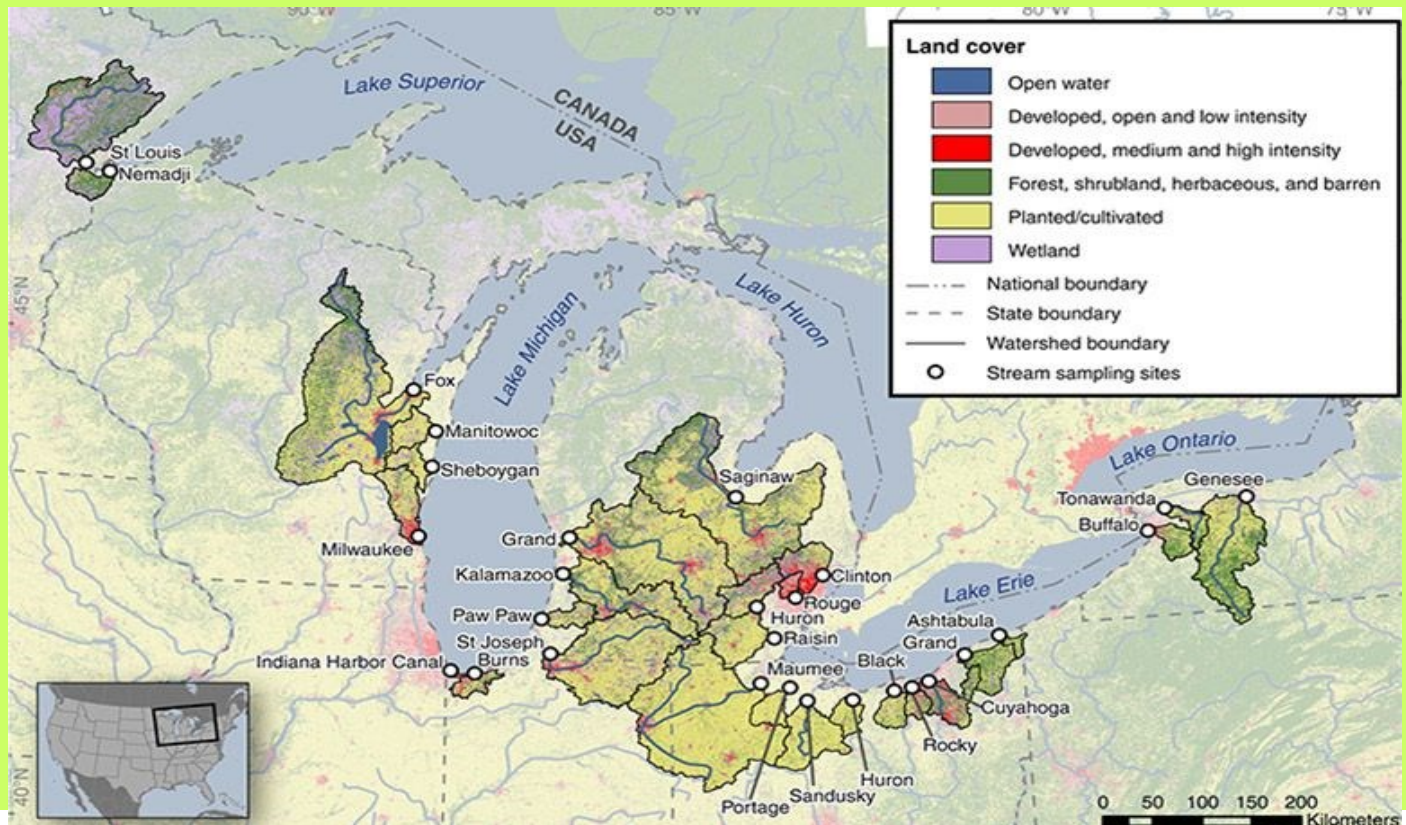
Products to avoid on store shelves .



Plastic water bottles at the beaches can be easily carried into the water.

Micro Plastics Stream Sampling Sites

Photo: Environmental Science and Technology



Dagwaagin ~ Fall

Manoominike ~ Makes Rice



Waatebagaa-Giizis ~ Sept/Oct

Gashkadino-Giizis ~ Nov

Manidoo-Giizisoons ~ Dec

MAAMINGIN ~ GATHER (COLLECT THEM)



Mashkiigiminan ~ Cranberries



BAGIDA'WAAD ~ FISHES WITH A NET

Home Energy (and \$\$\$\$) Saving Tips

1: Seal up the drafts! Roll up bath towels and put them at the base of doors to stop warm air from leaking out and cold air from leaking in. Or, get fancy and make your own door draft stopper snake like the one below.

2: Turn on a fan. Flip the little switch on your ceiling fan so it blows counter-clockwise rather than clockwise. The fan will now blow warm air collected near the ceiling back down to the spaces where people hang out.

3: Turn down your water heater. This one only takes a couple minutes and will save you money every month. Most manufacturers preset water heaters to a scalding 140 degrees. If you lower the temperature to a still hot 120 degrees, you can reduce your water heating costs by 10%. That adds up over the years.

4: Close your storm doors and windows. A properly installed storm door can reduce your heating bill by as much as 45%.

5: Put on a sweater and turn down the thermostat. For every degree you turn down the heat during heating season, you can save between 1% and 3% on your heating bill. One light sweater provides the wearer about two degrees of added warmth. Have your kids practice their math, and ask them to figure out the energy and money saving potential for this one.

6: When in doubt, calk it out! Wherever you find loose seals, such as around windows, around the chimney or around pipes, cold air is finding its way into your home. Get out the calk and close up those leaks.

7: Insulate, insulate, insulate. Ceilings and attics are often overlooked and under insulated. We all know warm air moves up, so it makes sense to focus on insulating the spaces above our heads. Also, insulate the water heater for more energy savings, and while you're at it, throw some insulation around water pipes. This will provide the added benefit of protecting against frozen pipes on those especially cold nights.

8: Change the filter on your furnace. Okay, this one is a little boring and inconvenient, and costs a bit of money up front, but it will help your furnace run more efficiently and save you money in the long run. It is a lot cheaper and less of a hassle to change a filter here and there (recommended once a month) than to buy a whole new furnace when your neglected furnace breaks down in the middle of February.

9: Let in the light! Open the curtains and bask in the sunshine. Center household activities in spaces with south facing windows where you will find the best winter light. When the sun goes down, cover the windows with thick curtains or a blanket.

10: If your energy provider is Xcel Energy, you qualify for instant discounts on energy saving (75% less energy used than incandescent bulbs), long lasting (up to ten years) CFL light bulbs. Discounts of \$1.50 per pack for up to ten packs of CFLs are available in participating stores in Ashland. Check for Focus on Energy signage posted near CFLs and get your immediate discounts upon purchase!



Environmental Impacts of Road Salt & Ice Melt

With winter on its way, icy roads, driveways and sidewalks are soon going to be an everyday issue for us all. Road salt and other ice melt products however, contain impurities that make their way into our environment through rain/snowmelt runoff and spray from vehicles, which allows them to affect the local environment. According to The Salt Institute in Alexandria, Virginia, about 17 million tons of deicing salt is applied to roadways in the U.S. each year.



Impacts on Plants & Soil

The most visible impact of road salt on our environment is in the grass, shrubs, and foliage along the roadside. Salt causes dehydration which leads to leaf damage and also harms root growth, nutrient uptake and cause injury to seed germination, stems, leaves, and flowering ability. Salt can ultimately lead to plant death, which can allow invasive species to take over an area.



Road salt can also influence the chemistry of soils by leaching out calcium, magnesium and potassium and inhibiting important soil bacteria, all of which decreases soil fertility.

Impacts on Water Quality

Contaminants from road salt enter groundwater and waterways by infiltration, runoff and through storm drains. Chloride remains in the watershed until it is flushed downstream. Meaning the road salt will remain in our waterways until it is flushed into Lake Superior, neither of which is good. Since groundwater takes much longer to recharge, chloride can remain for a very long time and contaminated wells often must be replaced.

Impacts on Human Health

Sodium in drinking water is a health concern for individuals restricted to low-sodium diets due to hypertension (high blood pressure). Chloride is not toxic to human health at low levels but does cause taste and odor issues.



Impacts on Aquatic Life, Wildlife, & Pets

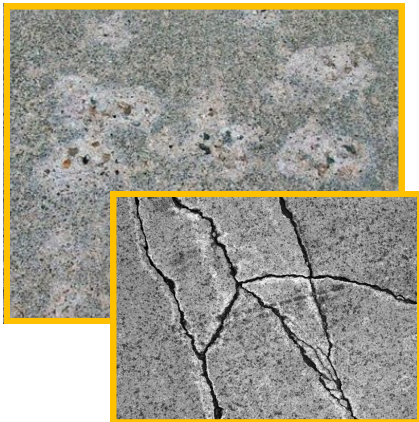
Chloride in surface waters can be toxic to fish, macroinvertebrates (bugs) and amphibians. Birds and other wildlife often consume road salt, which can lead to dehydration, confusion and toxicity as well as cause increased vehicular accidents because animals are drawn to roads more often . Damage to vegetation can also limit food resources, shelter, and nesting sites.



Your Pets



The 2 biggest concerns for pet owners are ingestion of salt and paw health. The ASPCA's Poison Control Center says that ingestion of salt melt can cause vomiting, diarrhea, excessive thirst, weakness, seizure, coma, and even death. Exposure of your pet's paws to road salt can produce painful irritation, inflammation, and cracking of the feet pads that can be prone to infection and are slow to heal.



Impacts on Infrastructure

Chloride ions increase the conductivity of water and accelerate corrosion. Chloride can penetrate and deteriorate concrete on bridges, roads, sidewalks and parking garage structures, and damage reinforcing rods, compromising structural integrity.

Salt also damages vehicle parts such as brake linings, frames, and bumpers.

The cost of corrosion damage and corrosion protection practices for highways and vehicles costs millions of dollars every year.

Alternatives to Ice Melt Products

For Roads:

- Cheese brine: In Wisconsin, cheese brine is now part of the de-icing process. The liquid is used in factories to soak certain cheeses. As a bonus, because it's a byproduct that's thrown away after the cheese is made, it's free.
- Molasses: Some towns in the U.S. are favoring sweet over salty as they turn to molasses. Mixing it into a salt brine solution apparently helps salt stick to the roads and makes it less corrosive.
- EcoTraction: Invented by a Canadian company, EcoTraction is made of non-toxic, all-natural volcanic rock. The granules embed into ice and snow, creating a solid, non-slip surface. Founder Mark Watson developed the product after his dog died of cancer, which may be triggered by toxins in road salt.

For Sidewalks and Driveways:

- Sand, light gravel, pea rock, and cat litter: can provide traction without melting ice. Can use in combination with a



Treaty Natural Resources Open House at Legendary Waters Resort & Casino

The Treaty Natural Resources Open House was hosted at Legendary Waters Resort and Casino on Thursday August 11th from 5:00-7:00 pm. This year, we hosted a silent auction for the Carl Butterfield family and all proceeds were donated. Once again, we had a fantastic fish fry with a pot luck meal, department booths, and new this year we had presentations from individual staff during the meal.

We would to thank the following local businesses and Red Cliff Tribal Programs for their donations.

Business		
Ace hardware	Solar light	
Keeper of the light	(2) Wind socks, (2) Hats	
Living Adventures	1 person sea caves trip	
	(10) Kids gift	
Buffalo Bay Gas	bags	
Newago's Fish Market	(2) 25\$ gift cert	
Legendary Waters	(2) Stay and play packages	
Program		
ECC	(8) Books, gloves, hat, (2) maple syrup, bubbles, coffee mug	
Family human services	2 pounds of Wild Rice	
Tribal Administration	Miscellaneous gift bag	
Community garden	(2) Fruit trees, CSA weekly gift basket, pressure cooker	
	5	
LAMP	books	
Clinic	Water bottles, hand fans	
	Solar globe, drill kit, kitchen knife set, Bird feeder and	
Housing Authority	seed.	
Treaty Natural Resources	Grill set, Key Chain, Dresser, Wild Rice, Sleeping Bag, Packers picture frame.	

The open house was traditionally hosted at the Red Cliff Fish Hatchery, but due to weather and other factors, we decided to move to Legendary Waters and it turned out to be a great thing. We had great participation this year with approximately 90 people attending the event and we are looking forward to hosting more open house events in years to come.



What Can Be Recycled?

Please empty all bags that you brought recyclables in!

Do not dispose of bags in recycle bin.

**Cardboard Boxes
Flattened**



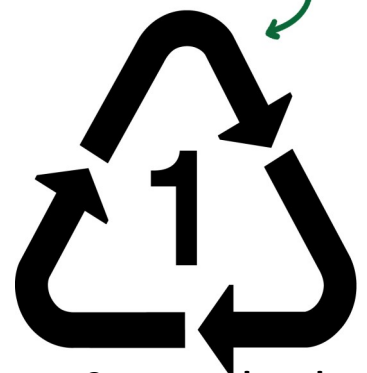
**Mixed
Papers**



**#1 and #2
Plastic Bottles**



look for this!



**Steel, Tin and
Aluminum Cans**



**Glass
Bottles**



Aluminum Cans

Cans are placed
in a separate
container at the
Transfer Station.
Please watch for
signs!

What Can't Be Recycled?



LIGHT BULBS &
LIGHTNING FIXTURES



PAINT, OIL, GASOLINE,
PESTICIDES, FLAM-
MABLE LIQUIDS



FOOD WASTE



PLASTIC BAGS & OVERWRAP
(PLASTIC FILM)



Styrofoam



MEDICATIONS &
USED NEEDLES



CELLPHONES



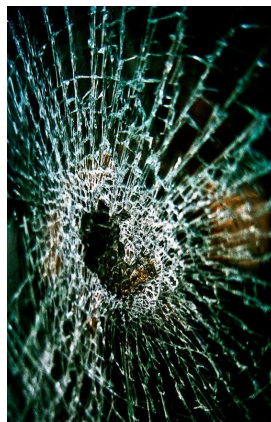
Diapers



Cigarette Butts



Clothes



Broken Mirrors/windows



Used Napkins, Utensils,
or Paper Plates



Tribal elder Marvin Defoe parching wild rice at Raspberry campground event.



RED CLIFF

Treaty Natural Resource Division

Fisheries	715-779-3750
Environmental	715-779-3650
Natural Resources	715-779-3795
Transfer Station	715-779-0171
Conservation Wardens	715-779-3732